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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,561	08/18/2003	Yi-Fang Michael Shiuan	60077-0012	4933

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EXAMINER

XIAO, KE

ART UNIT PAPER NUMBER

2629

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/643,561	<b>Applicant(s)</b> SHIUAN ET AL.	
	<b>Examiner</b> Ke Xiao	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 and 36 is/are allowed.
- 6) ☒ Claim(s) 1,3,5-9,11,13,15-18,20,22-26,28,30,32-34,37 and 38 is/are rejected.
- 7) ☒ Claim(s) 4,10,12,14,21,27,29 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 3, 5-9, 11, 13, 15-18, 20, 22-26, 28, 30, 32-34, 37 and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Leske (US 5,473,385) in view of Shelton (US 6,046,709).

Regarding independent **Claims 1, 18, 37 and 38**, Leske teaches a method and apparatus comprising a mechanism for receiving a request from a component to adjust an operational parameter of the component (Leske, Fig. 3 element 49, Col. 2 lines 30-50 frequency adjust signal, Col. 6 lines 1-31); and

a mechanism for sending a response to the component at a proper time to cause the component to adjust the operational parameter, at least partially, during a particular time period in which a first display is experiencing a blank period (Leske, Fig. 3 element 49, frequency adjust, 51 and 54, Col. 2 lines 30-50, Col. 6 lines 1-31).

Leske fails to teach that the time period including a second display also experiencing a blank period. Shelton teaches that two or more displays can be used in conjunction with each other. And that all the displays in a system can be adjusted be synchronous with each other (Shelton, Fig. 1, Col. 2 lines 55-67). It would have been

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obvious to one of ordinary skill in the art at the time of the invention to utilize multiple displays as taught by Shelton in the system of Leske in order to realize a large visual data among tiled displays. It is further advantageous to synchronize the displays so that the both would experience a blanking period to prevent image degradation. To elaborate component 49 sends the frequency adjust as a request. The frequency is adjusted and sent back as a response during the vertical blanking period as shown by element 51.

Regarding **Claim 3, 9, 20 and 26**, Leske teaches that the frequency adjustment can occur at any time during the vertical blanking period, which includes the beginning of the vertical blanking period (Leske Fig. 3 elements 45 and 92). And since the combined teachings of Leske and Shelton teach that the displays are synchronous then the vertical blank periods must also be synchronous so therefore Leske in combination with Shelton teach that the proper time is a time during which the first display is experiencing a first blank period and the second display is beginning to experience a second blank period.

Regarding **Claims 5, 11, 22 and 28**, Leske in combination of Shelton further teaches that the first and second blanking periods are both vertical blanking periods (Leske, Col. 2 lines 30-50).

Regarding **Claims 6-8, 13, 16, 23-25, 30 and 33**, Leske in combination of Shelton further inherently teaches a mechanism for determining whether the first display is currently experiencing a vertical blank period; and

a mechanism for sending, in response to a determination that the first display is currently experiencing a vertical blank period, the response to the component when the second display is about to being experiencing a vertical blanking period or a horizontal blanking period. To elaborate the displays are both inherently always about to experience a next vertical or horizontal blanking period during normal operation therefore the claimed limitations are inherently satisfied.

Regarding **Claims 15, 17, 32 and 34**, Leske teaches that the frequency adjustment can occur at any time during the vertical blanking period, which includes the beginning of the vertical blanking period (Leske Fig. 3 elements 45 and 92). And since the combined teachings of Leske and Shelton teach that the displays are synchronous then the vertical blank periods must also be synchronous so therefore Leske in combination with Shelton teach that the proper time is in response to a determination that the first display is currently experiencing a vertical blank period, sending the response to the component when the second display beings to experience a vertical blank period (Leske, Fig. 3 element 45 and 92, Col. 2 lines 30-50).

**Claims 2 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Leske (US 5,473,385) in view of Shelton (US 6,046,709) as applied to claims 1 and 18 above, and further in view the applicant's admitted prior art.

Regarding **Claims 2 and 19**, Leske in combination with Shelton fail to teach that the component is a CPU but do however teach that the operational parameter is an operating clock frequency (Leske, Col. 2 lines 30-50). The applicant's admitted prior art

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teaches that it is known in the art to adjust the frequency of the CPU in order to accommodate different loads. And such a frequency adjustment interferes the display system because the image data is not allowed to reach the display at the appropriate times (Pg. 1-4). The same problems are discussed by Leske only for a different type of processor. Both processors affect the image when they are adjusting frequency. So therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the frequency of any component which affects display quality during the blank period as taught by Leske including a CPU as taught by the applicant's admitted prior art in order to prevent image degradation.

### ***Response to Arguments***

Applicant's arguments with respect to Claims 1-3, 5-9, 11, 13, 15-20, 22-26, 28, 30, 32-34, 37 and 38 have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

**Claims 35 and 36** are allowed.

**Claims 4, 10, 12, 14, 21, 27, 29 and 31** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding **Claims 4, 10, 12, 14, 21, 27, 29 and 31** prior art fails to teach that the second blanking period is a horizontal blanking period as claimed.

Regarding **Claims 35 and 36** prior art fails to teach the response of to the component under the specified conditions as claimed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ke Xiao whose telephone number is (571) 272-7776. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 2<sup>nd</sup>, 2005 - kx -

  
SUMATI LEFKOWITZ  
SUPERVISORY PATENT EXAMINER